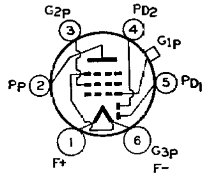


RCA-1F6

DUPLEX-DIODE PENTODE



The 1F6 is a duplex-diode pentode consisting of two diodes and a pentode in a single bulb. It is recommended for service as a combined detector, amplifier (radio-frequency, intermediate-frequency or audio-frequency), and automatic-volume-control tube in battery-operated receivers. For diode-detector considerations, refer to page 26.

CHARACTERISTICS

FILAMENT VOLTAGE (D. C.)	2.0	Volts
FILAMENT CURRENT	0.06	Ampere
GRID-PENTODE PLATE CAPACITANCE (With shield-can)	0.007 *max.*	μμf
INPUT CAPACITANCE	4	μμf
OUTPUT CAPACITANCE	9	μμf
BULB		ST-12
CAP		Small Metal
BASE		Small 6-Pin

Pentode Unit—As Class A R-F or I-F Amplifier

PLATE VOLTAGE	180 *max.*	Volts
SCREEN VOLTAGE (Grid No. 2)	67.5 *max.*	Volts
GRID VOLTAGE (Grid No. 1)	−1.5	Volts
PLATE CURRENT	2.0	Milliamperes
SCREEN CURRENT	0.6	Milliampere
PLATE RESISTANCE (Approx.)	1	Megohm
AMPLIFICATION FACTOR (Approx.)	650	
TRANSCONDUCTANCE	650	Micromhos
TRANSCONDUCTANCE (At —12 volts bias)*	15	Micromhos

Pentode Unit—As Resistance-Coupled A-F Amplifier

PLATE-SUPPLY VOLTAGE		135		135	Volts
SCREEN-SUPPLY VOLTAGE		135		135	Volts
D-C GRID VOLTAGE		−1.0		−2.0	Volts
PEAK A-F GRID VOLTAGE		0.64		0.62	Volt
ZERO-SIGNAL D-C PLATE CURRENT		0.42		0.42	Milliampere
MAX.-SIGNAL D-C PLATE CURRENT		0.34		0.34	Milliampere
PLATE RESISTOR		0.25		0.25	Megohm
SCREEN RESISTOR		1		0.8	Megohm
LOAD RESISTANCE		**		**	
GRID RESISTOR†	1.0	0.5	1.0	0.5	Megohm
VOLTAGE AMPLIFICATION	48	43	46	41	
TOTAL HARMONIC DISTORTION	5	5	5	5	Per cent
PEAK VOLTAGE OUTPUT	30.8	28	28	25.2	Volts

** The load resistance across which the output voltage is developed, consists of the plate resistor, coupling condenser, and grid resistor of the following tube.
† For the following tube. * For cathode current cut-off.

Diode Units

The two diodes and the pentode are independent of each other except for the common filament. The two diode units are placed at the negative end of the filament. Operation curves for diode units are given under type 6B7.

INSTALLATION AND APPLICATION

Refer to INSTALLATION of type 1A6. The 1F6 is similar in application to type 6B8. The maximum value of resistance in the grid circuit of this tube should not exceed 1.0 megohm for any condition of operation. A family of plate characteristic curves is given on page 61.